

Appl. No. 09/491,991
Amdt. Dated August 30, 2006
Reply to Office Action of June 15, 2006

REMARKS/ARGUMENTS

Claims 1-68 are pending in the present application.

This Amendment is in response to the Office Action mailed June 15, 2006. In the Office Action, the Examiner rejected claims 1-68 under 35 U.S.C. §103(a). Applicants have amended claims 1, 3, 8-12, 14, 16-18, 20, 21, 25-29, 31, 33-35, 38, 43-46, 48, 50-52, 54, 55, 59-63, 65, and 67-68. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Response to the Examiner's arguments

In the Office Action, the Examiner contends that Fukuta teaches broadcasting the congestion status to at least one other node in the network as Fukuta teaches broadcasting to the transmission node, the transmission node/source being a different node than the node with the congestion (Office Action, page 10, second full paragraph). Applicants respectfully disagree. As argued in the previous response, Fukuta merely discloses returning the congestion indicator back to the source of the packet (Fukuta, col. 4, lines 55-62). Applicants invite the Examiner to read carefully the following excerpt:

"According to the present invention, when a congestion of packets occurs in a switch with respect to an output line, the switch unit adds congestion indicating information (to be simply referred to as a congestion indicator herebelow) to a packet destined for the congested output line and operates to switch the resultant packet to an objective line interface unit so as to be sent out to the transmission source of the packet." (Fukuta, col. 4, lines 55-62; emphasis added.)

As seen from the above excerpt, the congestion indicator is returned to the transmission source of the packet, not to another node.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,090,011 issued to Fukuta et al. ("Fukuta") in view of U.S. Patent No. 6,563,809 issued to Proctor et al. ("Proctor"); and claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68

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under 35 U.S.C. §103(a) as being unpatentable over Fukuta in view of Proctor, and further in view of U.S. Patent No. 6,560,654 issued to Fedyk et al ("Fedyk"). Applicants respectfully traverse the rejection and contend that the Examiner has not met the burden of establishing a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP* §2143, p. 2100-129 (8th Ed., Rev. 2, May 2004). Applicants respectfully contend that there is no suggestion or motivation to combine their teachings, and thus no *prima facie* case of obviousness has been established.

1. Claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66:

The Examiner rejected claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 under 35 U.S.C. §103(a) as being unpatentable over Fukuta in view of Proctor. Applicants respectfully traverse the rejections for the following reasons.

Fukuta discloses a packet congestion control method and packet switching equipment. When a congestion occurs, a congestion indicator is added to a packet destined for the congested output line and the resultant packet is switched to be sent out to the transmission source of the packet (Fukuta, col. 4, lines 55-62). In other words, the congested indicator is simply returned back to source of the packet. It is not advertised or broadcast to other nodes in the network.

Proctor discloses a subscriber-controlled registration technique in a CDMA communication system. The communication system includes a plurality of base stations. The base stations communicate with a plurality of mobile stations (Proctor, col. 2, lines 24-29). The communication protocol includes a congestion indicator signal that identifies whether the base station is operating in a congested state. The congestion indicator field may simply include a flag signal (Proctor, col. 2, lines 59-67). When the base station is operating in a congested state, the flag signal may indicate that the mobile station should not attempt to register with the base station (Proctor, col. 3, lines 1-4).

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Fukuta and Proctor, taken alone or in any combination, do not disclose, suggest, or render obvious, at least one of (1) determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, (2) the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node, and (3) broadcasting the congestion status from the node to the at least one other node in the single peer group or the hierarchical level, as recited in claims 1, 18, 35, and 52; or (4) receiving a congestion status associated with a node in a single peer group or a hierarchical level in the network, the congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, (5) the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node, and (6) routing the call based on the received congestion status, as recited in claims 10, 27, 44, and 61.

Fukuta merely discloses returning a congestion indicator to the transmission source of the packet. Furthermore, since Fukuta explicitly discloses returning a congestion indicator to the transmission source, Fukuta does not suggest broadcasting to one other node. The following excerpt in Fukuta is included for case of reference.

"The congestion indicator is, as will be described in the following paragraphs, added to a header portion to be used only in the switch and is removed when the packet is passed through the transmission interface circuit. In consequence, the transmission packet sent to the destination equipment does not include the congestion indicator." (Emphasis added.)

(Fukuta, col. 5, lines 7-13)

Fukuta, therefore, specifically teaches that the congestion status is not to be broadcast to other nodes. In effect, Fukuta teaches away from the present invention. Accordingly, combining Fukuta with any other references is improper. It is improper to combine references where the references teach away from their combination. In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

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Furthermore, Fukuta does not disclose a node in one of a single peer group and a hierarchical level. Fukuta merely discloses terminals communicating with each other via packet switches (Fukuta, col. 9, lines 11-13). Since these terminals are connected directly at the same level, they cannot correspond to a level in a hierarchical system.

Proctor merely discloses a plurality of base stations broadcasting congestion indicator signals to a mobile station. The mobile station does not broadcast a congestion status signal. It is not configured to do so because it makes its decision to register with a base station based on the loading indicators transmitted globally from the base station (Proctor, col. 2, lines 20-23). Furthermore, the mobile station does not use a transit flag to determine if a call is routed through the node. Proctor merely discloses a flag signal to indicate if a mobile station may register with the base station (Proctor, col. 2, lines 65-67; col. 3, lines 1-4), not to route a call through the node. To clarify this aspect of the invention, claims 1, 10, 18, 27, 35, 44, 52, and 61 have been amended.

Furthermore, Proctor does not disclose or suggest, at least one of (1) the congestion status corresponding to a measured condition at the node as recited in independent claims 10, 27, 44, and 61, and (2) measuring a node condition at the node as recited in dependent claims 2, 19, 36, and 53. Proctor merely discloses setting a flag signal to indicate if the base station is in a congested state (Proctor, col. 2, lines 60-62). There is no measured condition at the node, including the mobile station. In addition, Proctor does not disclose a node in one of a single peer group and a hierarchical level. Proctor merely discloses a plurality of base stations communicating with a plurality of mobile stations (Proctor, col. 2, lines 23-29; Figure 1). The mobile stations communicate with the base station at the same level, not a hierarchical level.

There is no motivation to combine Fukuta and Proctor because neither of them addresses the problem of managing congestion. Among other things, there is no teaching or suggestion that the congestion status being represented by a transit flag to determine if a call is routed through the node or broadcasting the congestion status to at least one other node. Fukuta, read as a whole, does not suggest the desirability of the congestion status being represented by such a transit flag or broadcasting the congestion status to the at least one other node.

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For the similar reasons, dependent claims 2-9, 11-17, 19-26, 28-34, 36-43, 45-51, 53-60, and 62-68 which depend on independent claims 1, 10, 18, 27, 25, 44, 52, and 61 respectively are distinguishable from the cited prior art references.

In addition, with regard to amended claims 3, 20, 37, and 54, Fukuta and Proctor, taken alone or in any combination, do not disclose, suggest, or render obvious, at least one of (1) setting the transit flag if the congestion status indicates a congestion, to indicate that a call through the node is avoided unless the node is a terminating node; and (2) resetting the transit flag, if the congestion status does not indicate a congestion, to indicate that the node is not restricted for transit.

As discussed above, Proctor merely discloses a flag signal to indicate if a mobile station may register with the base station (Proctor, col. 2, lines 65-67; col. 3, lines 1-4), not to indicate that a call through the node is avoided unless the node is a terminating node, or to indicate that the node is not restricted for transit.

2. Claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68:

The Examiner rejected claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 under 35 U.S.C. §103(a) as being unpatentable over Fukuta in view of Proctor, and further in view of Fedyk. Applicants respectfully traverse the rejections for the following reasons.

Fukuta and Proctor are discussed above.

Fedyk discloses an apparatus and method of maintaining timely topology data within a link state routing network. A link state routing network utilizes broadcast advertisements to notify network devices of bandwidth allocation in the link state network (Fedyk, col. 2, lines 42-43).

Fukuta, Proctor, and Fedyk, taken alone or in any combination, do not disclose, suggest, or render obvious, at least one of (1) determining a congestion status associated with a node in a single peer group or a hierarchical level in the network, (2) the congestion status being represented by a transit flag accessible to at least one other node in the single peer group or the hierarchical level to determine if a call is routed through the node, and (3) broadcasting the congestion status from the node to the at least one other node in the single peer group or the hierarchical level, as recited in claims 1, 18, 35, and 52; or (4) receiving a congestion status associated with a node in a single peer group or a hierarchical level in the network, the

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congestion status corresponding to a measured node condition at the node and being broadcast by the node to at least one other node in the single peer group or the hierarchical level, (5) the congestion status being represented by a transit flag accessible to the at least one other node to determine if a call is routed through the node, (6) routing the call based on the received congestion status, as recited in claims 10, 27, 44, and 61, (7) determining a congestion status associated with a PNNI node, and (8) broadcasting the congestion status to at least one other node using a transit flag being one of a PNNI topology state parameter, as recited by claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68.

As discussed in the above, since neither Fukuta nor Proctor discloses or suggests any of the elements (1) through (7) above, a combination of Fukuta and Proctor with any other reference(s) in rejecting claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 is improper.

Furthermore, Fedyk merely discloses link state routing networks utilizing Private Network Network Interface (PNNI) protocol, but not broadcasting a congestion status to at least one other node in the one of the single peer group and the hierarchical level. Fedyk discloses using broadcast advertisements to notify network devices of bandwidth allocation, not a congestion status. Fedyk does not disclose determining a congestion status. Fedyk merely discloses using a link state advertisement (LSA) to synchronize the source node with other nodes (Fedyk, col. 5, lines 62-67). The LSA is not a congestion status.

Therefore, Applicants believe that independent claims 1, 10, 18, 27, 35, 44, 52, 61 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicants respectfully request the rejection 35 U.S.C. §103(a) be withdrawn.

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Conclusion

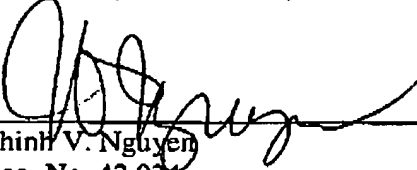
Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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